REMARKS/ARGUMENTS

Reexamination and reconsideration of this Application, withdrawal of the rejections, and formal notification of the allowability of all claims as now presented are earnestly solicited in light of the above amendments and remarks that follow. Claims 1-42 are pending. Claims 22-25 and 29-37 have been withdrawn from consideration. Claims 1-21, 26-28, and 38-42 are currently under examination.

Claims 1-3, 5-17, 19-21, 26-28, and 38-42 stand rejected under 35 U.S.C. §103(a) as being unpatentable over a combination of the previously-cited Litchfield, Noznick, Keith, and Eichel patents, further in view of U.S. Patent No. 5,979,459 to Schneider. Additionally, Claim 4 stands rejected over the above-noted references, further in view of an encyclopedia reference. Claim 18 stands rejected as obvious over the above-noted combination of references, further in view of the Frund patent. Applicants respectfully traverse all these rejections.

The Examiner continues to rely upon the Litchfield as disclosing a multicomponent cigarette filter comprising two filter plugs and a chamber therebetween that is split into two compartments by a barrier. The Examiner continues to rely upon the Noznick and Keith reference as disclosing the use of certain adsorbent materials that allegedly would be obvious for inclusion in the Litchfield filter. The Examiner relies upon the newly-cited Schneider reference as disclosing a multicomponent filter having two filter plugs, wherein the filter plugs have different denier per filament.

The Examiner continues to rely upon the Keith II and Noznick patents as disclosing certain filtering agents such as activated charcoal, and concludes that it would have been obvious to include such materials in replacement for the adsorbent materials utilized in the Litchfield patent. Applicants respectfully traverse this combination and submit that one of ordinary skill in the art would not be motivated to make such a change in the filter described in Litchfield.

In the Background section of the Litchfield patent, the inventors expressly acknowledge the existence of "absorbents and adsorbents" that can be used to remove products of combustion

from cigarette smoke while leaving certain components that make tobacco smoking pleasurable to the user (column 1, lines 20-30). The Litchfield inventors concluded that the use of "indiscriminate adsorbent filters of volatile components of tobacco smoke" would likely detract from the pleasure derived from smoking, and are therefore a less desirable filtration solution (column 1, lines 43-50). In response to prior art problem of balancing effective filtration of cigarette smoke with cigarette taste, the Litchfield inventors discovered that the byproducts of tobacco smoke that are desirably removed have an "avid compatible relationship" to certain tissue. Thus, Litchfield et al. configured a filter that comprises pulverized lung tissue in order to capitalize on the perceived compatibility between certain smoke components and animal tissue. The inventors of this patent contend that pulverized lung tissue can be successfully used to filter certain components of tobacco smoke while still providing an effluent having the factors contributing to the pleasure of tobacco smoking (column 2, lines 14-25).

The Examiner concludes that replacement of the pulverized lung tissue of Litchfield with materials such as activated carbon, based on the teachings of the Keith and Noznick patents, would be obvious in order to use the "more effective modern materials." However, one of ordinary skill in the art would not view the references as suggesting such a combination. While it is true that the Keith reference discloses that certain "well-known adsorbents" can be incorporated into a cigarette filter, the Keith reference also notes a significant problem with such conventional adsorbent materials. In particular, the Keith patent notes that when charcoal, alumina, or silica gel, all common adsorbent materials, are incorporated into a cigarette filter in sufficient qualities to reduce the levels of certain gaseous materials, it is found that the taste of the smoke is far from pleasing (column 2, lines 70 – column 3, line 4). The inventors of the Keith patent attempted to improve the taste performance of activated charcoal by adding zinc and iron oxides, with very little apparent success. While Table 1 in the document illustrates a minor improvement in the taste profile of their modified charcoal, the difference in taste scores between the modified and unmodified charcoal samples were quite minimal. Thus, at best, the Keith patent can be understood as describing precisely the type of adsorbent materials that have a negative impact on the taste profile of a cigarette that are discussed in the Background section of

the Litchfield patent. These are precisely the types of adsorbents that the Litchfield inventors were attempting to improve upon through use of a granulated lung tissue material. Thus, Applicants respectfully submit that one of ordinary skill in the art would not be motivated to replace the lung tissue of the Litchfield patent with the conventional adsorbents because the Litchfield patent actually teaches away from such a modification. In fact, the Litchfield patent appears to quite clearly indicate that conventional adsorbent materials have a deleterious effect on taste and are thus inferior to the granular lung tissue material described therein. This teaching away is in clear conflict with the Examiner's rationale for combining theses references. Even the Keith reference admits that undesirable taste effects are a consequence for using conventional adsorbent materials, such as activated charcoal, in cigarette filters. For at least these reasons, Applicants respectfully request reconsideration and withdrawal of all rejections relying on this combination.

Applicants also traverse all rejections of records because the Litchfield patent does not in fact teach or suggest a filter compartment divided by a semi-permeable barrier. The paper barriers of the Litchfield patent are actually impermeable paper barriers. The Examiner's attention is directed to column 2, lines 61-67, wherein the "baffle" 17 is described as consisting of an impervious piece of paper. Instead of using a semi-impermeable membrane that allows smoke to pass through, the Litchfield inventors utilize an impervious piece of paper having certain slots cut therein. However, such a configuration is not a semi-impermeable barrier as that term is utilized in the present application or understood in the art. For at least this additional reason, Applicants respectfully request reconsideration and withdrawal of all rejections based on the Litchfield patent.

Applicants also object to the combination of the newly-cited Schneider patent with the remaining patents of record. Applicants respectfully submit that one of ordinary skill in the art would not be motivated to combine the teachings of the Schneider patent with the Litchfield patent in order to arrive at the present invention as contemplated in the rejection. Instead, it is noted that the Schneider patent is directed to a ventilated filter cigarette having a coaxial filter element therein. The coaxial filter element comprises a filter jacket and a filter core, wherein the

fibers of the filter jacket have a lower dpf. Using this configuration, according to the inventors, when the ventilation zone is open, smoke passes primarily through the filter core. In the only filter embodiment even remotely similar to the configuration of the present invention or the Litchfield patent, the Schneider patent suggests a cigarette filter having a standard filter segment adjacent to the tobacco rod, a chamber that may be filled with a filtering material, and a mouth-end coaxial filter according to the invention.

Applicants respectfully submit that one of ordinary skill in the art would have no motivation to combine the teachings of Schneider with the Litchfield patent, at least in part because the Litchfield patent requires the use of one or more baffles, such as baffle 17, which is in the central region of the filter. The baffles are composed of an impervious piece of paper having a slot located therein in order to guide smoke through the granulated lung tissue in the central section of the filter. The purpose of the Schneider filter is to attempt to reduce the effect of changes in ventilation on the smoke yield within the cigarette. It is not clear that the filter of the Schneider patent would even function appropriately in the filter of Litchfield in light of the presence of the impervious pieces of paper within the filter element.

Further, we note that at least one other reference of record that is more closely directed to plug/space/plug filter arrangements, actually teaches away from the suggestion in the Schneider reference to place the more dense fibrous tow on the tobacco-side of the filter element. In particular, the Examiner's attention is directed to U.S. 2002/0166563, which describes a multi-component filter comprising a bed of adsorbent material located adjacent to a tobacco-side filter segment 18. The '563 publication clearly states that all filter components 17, 18, 20, and 22 should have "low particulate efficiency", and among all of those segments, the tobacco end component 18 should have the lowest particulate efficiency because it is upstream from the ventilation and therefore has greater effect upon mainstream smoke (see paragraph 43). This teaching away is more compelling in relation to the present invention than the teachings of the Schneider patent, which does not describe any specific embodiment comprising an adsorbent material at all, and merely suggests that the filter element could comprise a filtering material in a central chamber. The Schneider patent does not provide even a single specific example of such a

configuration. In contrast, the inventors of the '563 patent application devote their entire invention to cigarette filters having a central compartment filled with an adsorbent material and specifically address the particulate removal efficiency of various filter plugs surrounding such a bed of adsorbent material. Thus, Applicants respectfully submit that the teaching away in the '563 patent application is far more indicative of any motivation to one of ordinary skill in the art than the Schneider patent. An escapable conclusion is that one of ordinary skill in the art, having the benefit of all of these references including the '563 patent application, would be expressly disinclined to modify the Litchfield plug/space/plug filter arrangement to include a tobacco-end filter segment having a higher particulate removal efficiency. For at least these additional reasons, Applicants respectfully request reconsideration and withdrawal of all rejections.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,

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